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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[0001]

[Field of the Invention] this invention relates to the moquette mainly used for chair \*\*\*\*s, such as an automobile, a train, and an aircraft.

[0002]

[Description of the Prior Art] Strong abrasion resistance is required of the moquette used for chair \*\*\*\*. the \*\* moquette on which pile yarn forms a loop-like stitch in and constitutes a part of base knitting fabric especially from \*\* moquette woven with ground yarn -- differing -- around the ground woof, pile yarn bends in the shape of U character, and is only detouring -- since -- abrasion resistance is [ that a pile is easy to be drawn out during use ] missing

[0003] For this reason, since \*\* moquette applies backing adhesives to the rear face, it becomes cost quantity since the manufacturing process of the part which applies the backing adhesives increases, although adhesion fixation of the pile is carried out at base texture and it is finished, and the finished moquette becomes heavy by the weight of the applied backing adhesives, it will be not suitable to lightweight-izing of the automobile demanded recently.

[0004] Then, this invention person mixes heat weld nature fiber to the ground yarn of base texture, invents the technique of heating it after a weaving and making it weld to a pile, and is indicating to JP,59-30937,A (filing-date-of-application; Showa 57 year 8 month 13 day). The technique of mixing heat weld nature fiber to ground yarn such, and fixing a pile to base texture is indicated by JP,61-31131,A (JP,3-31131,B, filing-date-of-application; Showa 59 year 7 month 24 day) and JP,63-30371,U (JP,3-15573,Y, filing-date-of-application; Showa 61 year 8 month 8 day).

[0005]

[Problem(s) to be Solved by the Invention] By the technique of mixing heat weld nature fiber to ground yarn such, and fixing a pile to base texture, since heat weld nature fiber will carry out the weld junction of between other non-heat weld nature fiber which constitutes ground yarn, it becomes cylindrical and the moquette with the whole hard ground yarn obtained also lacks in drape nature (flexibility) by rough \*\*.

[0006] For this reason, even if it can use the moquette obtained by the conventional method for the facing of plate-like part material, such as a door trim of an automobile, and a rear side Fischer, as indicated by aforementioned JP,61-31242,A, it will become unsuitable for chair \*\*\*\* as which flexibility is required.

[0007] By the technique of starting aforementioned JP,63-30371,A at this point Although the \*\*\*\* line of thread which uses non-heat weld nature fiber as a core part, and makes heat weld nature fiber \*\*\*\* is used as ground yarn, between the non-heat weld nature fiber which constitutes a core part is changed into the free status that it can slide, without carrying out a weld junction by heat weld nature fiber and the whole ground yarn has prevented the hard thing become cylindrical Even in such a case, since it is wrapped by the melting resin of heat weld nature fiber with which the core part carried out melting and became plastics film-like, ground yarn becomes hard like plastic-lining electrical wire, and

the \*\*\*\*\* moquette suitable for chair \*\*\*\* is not obtained.

[0008]

[Objects of the Invention] Then, this invention carries out adhesion fixation of the pile at base texture, without spoiling the hand of the whole moquette by the weld nature fiber used for ground yarn, and aims at obtaining moquette excellent in the abrasion resistance which was suitable for chair \*\*\*\* by flexible \*\*\*\*.

[0009]

[Means for Solving the Problem] That is, it is characterized by the moquette concerning this invention being constituted by the \*\*\*\* line of thread which consists of \*\*\*\* by which the ground yarn of base texture which stops a pile is constituted from a core part constituted by non-heat weld nature fiber, and non-heat weld nature fiber and heat weld nature fiber.

[0010] here, the melting point means a thermoplastic synthetic fiber low 50 degrees C or more, and non-heat weld nature fiber has the melting point higher than other fiber from which the melting point is a thermoplastic synthetic fiber 170 degrees C or less, and, as for heat weld nature fiber, constitutes ground yarn 50 degrees C or more -- being concerned -- others -- fiber is meant

[0011] Therefore, the non-heat weld nature fiber else [, such as a well-known low melting point polyester fiber and a low melting point polyamide fiber, ] marketed with tradenames, such as \*\*\*\*\* and the \*\*\*\*\* pli pro OES, can also use the usual polyolefine fiber whose melting point is 120 degrees C - 160 degrees C as heat weld nature fiber for heat weld nature fiber, if the melting point is a synthetic fiber and a chemical fiber 200 degrees C or more like natural fibers and usual polyester fibers, such as cotton and hemp.

[0012] On the other hand, although a synthetic fiber and a chemical fiber 200 degrees C or more are mainly used for non-heat weld nature fiber, heat weld nature fiber can also use [ a chemical fiber ] the usual polyolefine fiber with the melting point higher 50 degrees C or more than they for it as non-heat weld nature fiber, if the melting point of a natural fiber or polyester-fiber others is the low melting point polyester fiber and low melting point polyamide fiber whose melting point is 100-120 degrees C.

[0013] Although it is placed between \*\*\*\*s which accomplish the front face of the ground yarn which touches a pile by heat weld nature fiber and it is used effective in adhesion fixation of a pile, not using heat weld nature fiber for the core part of the ground yarn which carries out adhesion fixation of the pile in this invention at base texture It changes into the free status that it does not paste up by heat weld nature fiber, but can slide on between the non-heat weld nature fiber which constitutes a core part freely with it. By doing so, it is for preventing the thing with hard ground yarn become cylindrical, and is for lessening expansion and contraction of ground yarn and securing the dimensional stability of moquette by arranging non-heat weld nature fiber straightly along with \*\*\*\* of ground yarn.

[0014] If the rate for which it accounts to the whole ground yarn of a core part at this point becomes less than 5 % of the weight, it will be hard coming to secure the flexibility of moquette, and dimensional stability, and on the other hand, if the rate for which the rate exceeds 30 % of the weight, and it accounts to the whole ground yarn of \*\*\*\* becomes less than 70 % of the weight, the heat weld nature of \*\*\*\* will fall and it will become inadequate pasting up with a pile and base texture.

[0015] Therefore, as for the rate for which it accounts to the ground yarn of a core part, it is desirable to apply the multifilament yarn which considered as 10 - 20 % of the weight, and followed straightly the non-heat weld nature fiber of a core part along with \*\*\*\* of ground yarn preferably five to 30% of the weight.

[0016] The ground for mixing heat weld nature fiber and non-heat weld nature fiber to \*\*\*\* The film which the heat weld nature fiber which carried out heating fusion welded on the surface of the core part like plastic-lining electrical wire is not formed. It is because the melting resin of the heat weld nature fiber which it is heated and was fused is divided by non-heat weld nature fiber and it is made to be dotted with it on the surface of a core part, and is for preventing becoming cylindrical with hard ground yarn by doing so.

[0017] In order to make it such, the rate of the non-heat weld nature fiber occupied to \*\*\*\* is made into 40 - 85 % of the weight, and heat weld nature fiber occupies the 15 - 60 remaining % of the weight. Therefore, the rate for which it accounts to the whole \*\*\*\* line of thread (ground yarn) of heat weld nature fiber is made into 10.5 % of the weight ( $=0.7 \times 0.15$ ) or 57 % of the weight ( $=0.95 \times 0.6$ ), and is made to become 12 % of the weight ( $=0.8 \times 0.15$ ) or 54% of the weight ( $=0.9 \times 0.6$ ) preferably.

[0018] Thus, ground yarn is made into a \*\*\*\* line of thread in order to carry out adhesion fixation of the pile in this invention at base texture. Since the greatest ground for mixing heat weld nature fiber only to the \*\*\*\* is for securing the flexibility of moquette Using the thing of the polyamide system with low Young's modulus for heat weld nature fiber is recommended, and using the polyester fiber which is not pasted up on non-heat weld nature fiber not much firmly by the difference of the material with the heat weld nature fiber of a polyamide system is recommended.

[0019] Although a \*\*\*\* line of thread can be used for the both sides of the ground warp which constitutes the base texture of moquette, and the ground woof, a pile surely uses a \*\*\*\* line of thread for the ground woof which bends in the shape of U character, and detours.

[0020]

[Example] The polyester filament yarn of 40d/3F is used as a core part. The single-yarn fineness of 2d, and a low melting point polyamide fiber with a fiber length of 51mm (110 degrees C of melting points), The mixed staple fiber with a polyester fiber (250 degrees C or more of melting points) with a single-yarn fineness [ of 1.5d ] and a fiber length of 51mm is made into \*\*\*\*. A core part occupies 11% of the weight of a \*\*\*\* line of thread, and the low melting point polyamide fiber of \*\*\*\* occupies 11% of the weight of a \*\*\*\* line of thread. The \*\*\*\* line of thread to which the polyester fiber of \*\*\*\* occupies 69% of the weight of a \*\*\*\* line of thread is used for ground warp and the ground woof. The polyester-fiber spun yarn of the meter yarn counts 20/2 is made into pile yarn. a pile horizontal density 111 [/cm] 95 [ // cm ] and a ground warp density weave the moquette from which 222 [ // cm ] and a ground woof density are set to cm in 190 [ / ], heat a rear face, and carried out the thermofusion of the low melting point polyamide fiber, and to base texture, the pile length density carried out adhesion fixation of the pile, and finished it.

[0021]

[Effect of the Invention] In the status according to this invention there is no heat weld nature fiber which carries out adhesion fixation of the pile at base texture in the core part which is \*\*\*\* of ground yarn, it is mixed and placed between \*\*\*\* which is the front face of ground yarn, and heat weld nature fiber carries out the thermofusion of other non-heat weld nature fiber to it, and paste up a pile and base texture, since the surface fraction of ground yarn will be dotted, ground yarn does not become hard by the heat weld nature fiber which carried out the thermofusion.

[0022] For this reason, since it has the drape nature demanded as chair \*\*\*\* and lining finishing by backing adhesives becomes unnecessary, the moquette concerning this invention is obtained efficiently, it is lightweight-ized by the coverage of the backing adhesives by which the lining application was carried out conventionally, texture is not closed by backing adhesives, but it is rich in permeability, is excellent in abrasion resistance with flexible \*\*\*\*, and is very convenient as chair \*\*\*\* for an automobile or the vehicles of aircraft others.

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CLAIMS

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[Claim(s)]

[Claim 1] Moquette to which it is the \*\*\*\* line of thread constituted by \*\*\*\* to which the ground yarn of the base ground which stops a pile changes from the core part which grows into non-heat weld nature fiber, and non-heat weld nature fiber and heat weld nature fiber, and the melting point of the heat weld nature fiber of \*\*\*\* is characterized by being lower than the melting point of the non-heat weld nature fiber of a core part and \*\*\*\* 50 degrees C or more.

[Claim 2] Moquette given in the above-shown claim 1 whose heat weld nature fiber \*\*\*\*s is [ the weight ratio of \*\*\*\* of a \*\*\*\* line of thread given in the above-shown claim 1 and a core part ] 5-30 to \*\*\*\* 70-95, and the weight ratio of the non-heat weld nature fiber of \*\*\*\* and heat weld nature fiber is 15-60 to non-heat weld nature fiber 40-85.

[Claim 3] Moquette given in the above-shown claim 2 whose \*\*\*\*s the weight ratio of \*\*\*\* of a \*\*\*\* line of thread given in the above-shown claim 2 and a core part is 10-20 to \*\*\*\* 80-90.

[Claim 4] Moquette given in the above-shown claim 3 whose heat weld nature fiber non-heat weld nature fiber given in the above-shown claim 3 is a polyester fiber of 250 degrees C or more of the melting points, and is a low melting point polyamide fiber of 130 degrees C or less of the melting points.

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